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VARIATION OF THE OVUM (*SARCOPTES SCABIEI*) UNDER COVERGLASS PRESSURE*

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This contribution is made to indicate the degree of alteration in dimensions of biologic specimens which can occur when they are mounted in fluid under a loose coverslip and the fluid is allowed to evaporate. I have frequently noticed that there is some increase; but had no idea that it amounted to as much, expressed in percentages, as is brought out by this test. Photographs were made of a ripe ovum of *Sarcoptes scabiei* at short time intervals as the fluid (water) evaporated, and all dimensions in the several photographs laid off on a scale with a compass. The findings are indicated in the table below. The photographs were taken at about four minute intervals under the heat of an Edinger apparatus.

	Length	Width
Photograph 1..........	0.190 mm.	0.130 mm.
Photograph 2..........	0.200 mm., 5.3% increase	0.138 mm., 6.2% increase
Photograph 3..........	0.208 mm., 9.5% increase	0.145 mm., 11.5% increase
Photograph 4..........	0.214 mm., 12.6% increase	0.150 mm., 15.4% increase

This means that such a difference in length as 12 per cent. and of width of over 15 per cent. is not to be overlooked when measuring biologic specimens either for comparison with known species or in describing new ones, and that the capillary force which is constantly being exerted more and more on a specimen should be remembered. The factor of pressure will of course vary in importance with different classes of material, depending on the shape, size and consistency of the object.

The dimensions recorded for any specimen should in all cases be as close as possible to those of the specimen as it exists in nature, i. e., as it lies in a stratum of fluid with something to protect it from the pressure of the coverglass. This can be accomplished coarsely by placing a minute drop of wax under the corners of the coverglass and warming over the flame as the coverslip is let down into position, or by ringing with vaselin. Finer adjustment of the thickness of the fluid stratum may be later accomplished under the microscope by hot wires applied to the wax pillars. In his work on protozoa, Doflein recommends such protection against pressure.

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